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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/964,375

09/28/2001

Jong-Seo Choi

P56533

2237

7590

01/11/2005

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EXAMINER

QUARTERMAN, KEVIN J

ART UNIT

PAPER NUMBER

2879

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/964,375	CHOI ET AL.	
	Examiner	Art Unit	
	Kevin Quarterman	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7, 10, 12, 16, 17, 20-22, 29, 36-53, 55-70, 72-74 and 76-79 is/are pending in the application.
- 4a) Of the above claim(s) 36-47 and 78 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7, 10, 12, 16, 17, 20-22, 29, 48-53, 55-70, 72-74, 76, 77 and 79 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment and remarks filed on 15 October 2004 have been entered.

Election/Restrictions

2. Applicant has renewed the traversal of the restriction requirement for the reasons previously stated in the reply filed on 26 February 2004. The Examiner provided answers to those arguments in the office action mailed on 23 July 2004.

Allowable Subject Matter

3. Claims 7, 10, 12, 16, 17, 20-22, 29, 48-53, 55-70, 72-74, 76, 77, and 79 are allowed.
4. The following is a statement of reasons for the indication of allowable subject matter: Claims 7, 29, and 57-67 were allowed in the previous office action.
5. Applicant's arguments regarding independent claim 10 are persuasive. Thus, claims 20-22, which depend upon independent claim 10, are also allowable.
6. Claims 12 and 17 were objected to for being dependent upon rejected base claims. Applicant has rewritten claims 12 and 17 in independent form including all of the limitations of the base claim and any intervening claims, as suggested by the Examiner. New claim 79 is also allowable for its dependency upon independent claim 17.

7. Applicant has amended claims 48-50 to overcome the indefiniteness rejection for lack of antecedent basis.

8. Applicant has amended independent claim 51 to include the limitations of canceled claim 54, which was previously objected to for being dependent upon a rejected base claim. Thus, claims 52, 53, and 55, which depend upon independent claim 51, are also allowable.

9. Claim 56 has been rewritten in independent form including the limitations of independent claim 51, in addition to other limitations.

10. Independent claim 68 has been amended to include the limitations of canceled claim 71, which was previously objected to for being dependent upon a rejected base claim. Thus, claims 69 and 70, which depend upon independent claim 68, are also allowable.

11. Independent claim 72 has been amended to include the limitations of canceled claim 75, which was previously objected to for being dependent upon a rejected base claim. Thus, claims 73, 74, and 76, which depend upon independent claim 72, are also allowable.

12. Claim 77 has been rewritten in independent form including the limitations of independent claim 72, in addition to other limitations.

13. The subject cathode structure is provided for suppressing deterioration of the cathode due to self-heating by reducing the generation of Joule heat caused by intrinsic resistance of the oxide cathode. The design is new and unique to the art.

Conclusion

14. This application is in condition for allowance except for the presence of claims 36-47 and 78 to an invention non-elected with traverse in the reply filed on 15 October 2004. Applicant is given ONE MONTH or THIRTY DAYS from the date of this letter, whichever is longer, to cancel the noted claims or take other appropriate action (37 CFR 1.144). Failure to take action during this period will be treated as authorization to cancel the noted claims by Examiner's Amendment and pass the case to issue. Extensions of time under 37 CFR 1.136(a) will not be permitted since this application will be passed to issue.

The prosecution of this case is closed except for consideration of the above matter.

Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Quarterman whose telephone number is (571) 272-2461. The examiner can normally be reached on M-TH (7-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin Quarterman
Examiner
Art Unit 2879

kq 
10 January 2005


Joseph Williams
Primary Examiner
Art Unit 2879